CLAIMS

What is claimed is:

1.   A method for creating a mask isolating a region of interest in an image and deleting information in said image peripheral to said region of interest, comprising the steps of:

a) obtaining a digital first image containing said region of interest, said region of interest represented by pixels having pixel values;

b) defining a first closed curve forming a perimeter around said region of interest in said first image;

c) creating a second image comprising a plurality of pixels, said second image having a boundary corresponding to at least a portion of said first image, wherein the first closed curve around said region of interest in said first image is represented in said second image as a matching second closed curve within said boundary in said second image;

d) assigning all pixels in said second image on said boundary and peripheral to said second closed curve with a first pixel value and assigning all pixels in said second image within the region bounded by said second closed curve a second pixel value, and

e) saving said second image with the pixel values assigned as in step (d) as a mask, wherein application of said mask to said first image deletes areas peripheral to said region of interest and leaves pixel values for said region of interest undisturbed.

2.   The method of claim 1, wherein step b) is performed by the steps of displaying said first image on display of a general-purpose computer and defining said first closed curve by user

interaction with said general-purpose computer using user interface devices provided by said general purpose computer.

3. The method of claim 2, wherein the second closed curve in said second image is created substantially simultaneously as said user interaction defines said first closed curve.

4. The method of claim 1, wherein said first image comprises an image of a biological specimen.

5. The method of claim 4, wherein said image comprises a magnified image.

6. The method of claim 2, wherein said second image comprises a rectangular image and wherein the boundary of said rectangular image is dynamically varied substantially simultaneous with the defining of the first closed curve in said first image to thereby insure that said second image completely encompasses said first closed curve.

7. A method for creating a mask isolating a region of interest in an image and deleting information in said image peripheral to said region of interest, comprising the steps of:

a) obtaining a digital image containing said region of interest, said region of interest represented by pixels having pixel values;

b) defining a first closed curve forming a perimeter around said region of interest in said first image;

c) creating a second image comprising a plurality of pixels, said second image having a

boundary corresponding to at least a portion of said first image, said second image initialized such that all the pixels of said second image have a first pixel value, wherein the first closed curve around said region of interest in said first image is represented in said second image as a matching second closed curve within said boundary in said second image;

d)   assigning all pixels in said second image on said boundary and peripheral to said second closed curve with a   a second pixel value, and

e)   saving said second image with the pixel values assigned as in step (d) as a mask, wherein application of said mask to said first image deletes areas peripheral to said region of interest and leaves pixel values for said region of interest undisturbed.

8.   The method of claim 7, wherein step b) is performed by the steps of displaying said first image on display of a general purpose computer and defining said first closed curve by user interaction with said general purpose computer using user interface devices provided by said general purpose computer.

9.   The method of claim 8, wherein the second closed curve in said second image is created substantially simultaneously as said user interaction defines said first closed curve.

10.   The method of claim 7, wherein said first image comprises an image of a biological specimen.

11.   The method of claim 10, wherein said image comprises a magnified image.

12.   The method of claim 8, wherein said second image comprises a rectangular image and wherein the boundary of said rectangular image is dynamically varied substantially simultaneous with the defining of the first closed curve in said first image to thereby insure that said second image completely encompasses said first closed curve.

13.   A workstation for creating a mask for a digital image composed of pixels having pixel values, said mask isolating a region of interest in said image and deleting information in said image peripheral to said region of interest, comprising:

a processing unit;

a user interface including a display and a pointing device associated with said display;

a memory storing said image;

machine readable instructions for execution by said processing unit, said machine-readable instructions comprising instructions for:

1) displaying said image on said display;

2) providing the user the ability to define with said pointing device and said display a first closed curve forming a perimeter around said region of interest;

3) creating a second image comprising a plurality of pixels, said second image having a boundary corresponding to at least a portion of said image encompassing and enclosing said region of interest;

4) creating in said second image a second closed curve within said boundary matching said first closed curve ;

5) assigning all pixels in said second image on said boundary and peripheral to said second closed curve with a first pixel value and assigning all pixels in said second

image within the region bounded by said second closed curve a second pixel value, and

6) applying the mask to the image and thereby deleting information peripheral to said region of interest and leaves pixel values for said region of interest undisturbed.